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### Abstract

A system for producing a presettable polarization mode dispersion includes an initial polarization splitter/combiner element, which divides the incoming signal into two signals in vertical polarization alignment to one another, a delaying unit, which is installed in one of the signal paths of the two split signals, and a second polarization splitter/combiner element, which reunites the two separated signals. The invention is distinguished in that, for the production of a second-order polarization mode dispersion, an element is provided which twists the polarization main axes ahead of and behind the element toward one another by an appropriate angle, and that the light signal emitted from this element is fed into a device, which likewise consists of a polarization splitter/combiner element, a delaying path, and an additional polarization splitter/combiner element for bringing the two signal paths back together.